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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/810,098	03/26/2004	Eduard Kunschir	12684.9USW1	8190

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EXAMINER	
LOPEZ, AMADEUS SEBASTIAN	
ART UNIT	PAPER NUMBER
3771	

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	03/22/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No.	Applicant(s)	
	10/810,098	KUNSCHIR, EDUARD	
	Examiner	Art Unit	
	Amadeus S. Lopez	3771	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on 7/05/2006.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) 2-7 and 15 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) 2-7 and 15 is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

Applicant's arguments filed 7/05/2006 have been fully considered but they are not persuasive. The applicant makes the argument that "Robertson et al teaches an aerosol generator where the vibrator element oscillates when an alternating voltage is applied at an appropriate frequency. This argument is disregarded since it not relevant to the scope and language of the claims.

Applicant further argues that Robertson et al does not disclose or suggest a "membrane" that is oscillated by a vibration generator. The examiner disagrees and maintains the previous examiner's interpretation of the array of nozzles (50) shown in figures 4a and 5a to have apertures through which droplets (72) are passed through. Further the previous examiner even contributes the known definition for a membrane which consists of: a "thin sheet of natural or synthetic material that is permeable to substances in solution" (www.dictionary.com). Therefore, the nozzle array as shown in Figure 5a and 5b can be considered a membrane.

The applicant further asserts that Robertson et al provides no disclosure or suggestion having an audible signal emitted by an oscillating membrane. The examiner disagrees and would like to direct the applicant towards the disclosure by Robertson et al in Col. 14, lines 9-34 wherein Robertson discloses that "with the cap 184 removed from the aerosol generator 170 and the reservoir 166 vent valve open, liquid flows from the reservoir through the dosage gauge 168 and aerosol generator when the vibrator element drive electronics are energized. When the dose gauge has reached its end

point, a completed dose signal is sent by the dose gauge electronics to the control logic which then deactivates the vibrator element drive electronics. Provided this occurs before the cycle timer has timed out then the correct dose will have been delivered. Then it is further disclosed that "if however the completed dose signal is not received before the cycle timer times out (inherently means that the vibrator is still vibrating since the vibrator only stops vibrating when the "completed dose" signal is received by the control logic) then the control logic generates an alarm signal indicating a failed dose delivery. This alarm activates an audio alarm. One such audio alarm is to drive the vibrator element with an audio frequency (this inherently means that the control means supplies a further second control signal to the oscillation generating device (54) during the first oscillation control signal that maintains the vibration of the device since the completed dose signal has yet to be received, such that the oscillation generating device oscillates the membrane (50) in an audible frequency range so as to emit an audible signal for a user." Therefore Robertson does in fact suggest an apparatus that applies two signals simultaneously in the described manner of the claimed invention.

The Ross reference was simply used to give a specific frequency range at which the oscillator would have to vibrate for a user to be able to hear the signal.

The applicant makes the argument that Ross et al does not discuss or suggest any power or energy requirements that are necessary for generating perceptible audible sounds. This argument is not relevant because it is not commensurate with the language and scope of the claims. At no point are energy or power requirements introduced into the language of the claims.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 15 and 2-7 are rejected under 35 U.S.C. 102(b) as being unpatentable by Robertson et al. (US 5,487,378).

As to claims 15 and 2, Robertson et al. disclose a device for inhalation therapy comprising an oscillatable membrane 50 for nebulizing a liquid. A membrane can be defined as a "thin sheet of natural or synthetic material that is permeable to substances in solution" (www.dictionary.com). Therefore, the nozzle array (50) as shown in Figure 5a and 5b can be considered a membrane. In addition, Robertson et al. states the common use of a membrane, "housing comprising a perforate membrane which defines a front wall of the chamber and which has a rear face contacted by liquid in use" (column 2, lines 34-35).

Robertson et al. continues to disclose an oscillation-generating device 84 having at least one connecting means. The connecting means 1 (labeled in figure 1 below; or 162) receives an oscillation control signal for oscillating the membrane 50 when the oscillation control signal is received such that a liquid 16/220 disposed on one side of the membrane is nebulized through the membrane 50 and is present on the other side of the membrane 50 as an aerosol (72) as shown in Figure 4a. Robertson et al. states

that an "apparatus further comprising vibrating means connected to the housing and operable to vibrate the perforate membrane to dispense droplets of liquid through the perforate membrane" (column 2, 36-40).

The device of Robertson et al. also disclose a control means 206,162 from which a first oscillation control signal (Col. 14, lines 9-34) is supplied to the at least one connecting means (1 in fig. 1 below; 162) of the oscillation-generating device 54,210 so that said oscillation-generating device 54, 210 oscillates the membrane 50 as shown in Figure 1 below and figure 4a. In Figure 10, Robertson et al. uses a function block diagram to further illustrate the electronic metered dose aerosol delivery system. Figure 10 includes a control means 162 that supplies a further control signal to the oscillation-generating device 170 causing the membrane 50 to oscillate in the audible frequency range so as to emit an audible signal 160 for a user (Col. 14, lines 9-34).

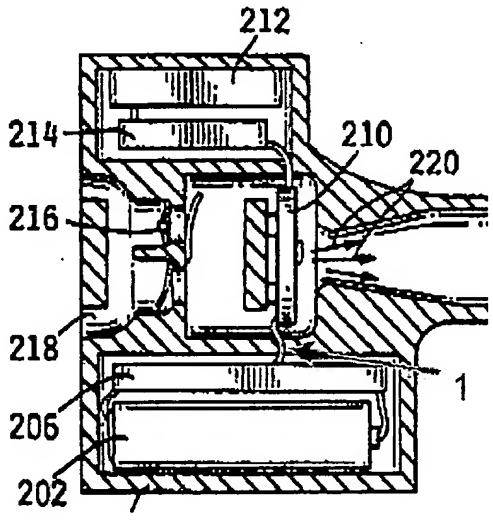

Figure 1: US 5487378

Robertson et al. also disclose a device for inhalation therapy with a further control signal supplied to the oscillation-generating device 170/210 in conjunction with

vibrator element 54 during the first oscillation control signal, via the same connecting means as the oscillation control signal 174 as shown in Figure 10 and Figure 1 above such that the oscillation generating device oscillates the membrane (50) in an audible frequency range so as to emit an audible signal for a user. in Col. 14, lines 9-34 wherein Robertson discloses that "with the cap 184 removed from the aerosol generator 170 and the reservoir 166 vent valve open, liquid flows from the reservoir through the dosage gauge 168 and aerosol generator when the vibrator element drive electronics are energized. When the dose gauge has reached its end point, a completed dose signal is sent by the dose gauge electronics to the control logic which then deactivates the vibrator element drive electronics. Provided this occurs before the cycle timer has timed out then the correct dose will have been delivered. Then it is further disclosed that "if however the completed dose signal is not received before the cycle timer times out (inherently means that the vibrator is still vibrating since the vibrator only stops vibrating when the "completed dose" signal is received by the control logic) then the control logic generates an alarm signal indicating a failed dose delivery. This alarm activates an audio alarm. One such audio alarm is to drive the vibrator element with an audio frequency (this inherently means that the control means supplies a further second control signal to the oscillation generating device (54) during the first oscillation control signal that maintains the vibration of the device since the completed dose signal has yet to be received, such that the oscillation generating device oscillates the membrane (50) in an audible frequency range so as to emit an audible signal for a user." Therefore

Robertson does in fact suggest an apparatus that applies two signals simultaneously in the described manner of the claimed invention.

As for claims 3-5, the oscillation-generating device (170/210 in conjunction with vibrator element 54) comprises an electromechanical transducer unit 56 in particular a piezoelectric material. Robertson et al. continues to disclose a support unit 52 to which the electromechanical transducer unit and the membrane 50 are attached. Robertson et al. states, "a piezo-electric transducer is secured to the vibrating member for inducing a rearward displacement...to discharge a small quantity of liquid through the nozzle opening" (column 2, lines 10-13). Robertson et al. disclose a device for inhalation therapy including a generator unit 92,162 that generates a further control signal, which is supplied to the oscillation-generating device 54, 84, 174 via the same connecting means as the first oscillation signal control signal shown in figure 6a or described in alternate embodiment in Col. 14, lines 9-34 as described above wherein a signal generated by control logic energizes vibrator element drive electronics 174.

As to claim 6, Robertson et al. has disclosed a device for inhalation therapy wherein the generator unit 92, 162 is integrated in the control means (162; Col. 14, lines 9-34); wherein it is disclosed that inputs to control logic 162 energize vibrator element drive electronics 174; further shown in figure 10 that generator unit 162 is the control means.

As to claim 7, Robertson et al discloses a device for inhalation therapy wherein the energy supply means 172,202 for the inhalation device being integrated in the

control means 162 or 206 (shown in figure 10 that energy supply means 172 is integrated with the control logic means 162).

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Amadeus S. Lopez whose telephone number is (571) 272-7937. The examiner can normally be reached on Mon-Fri 8:00AM-4:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Justine Yu can be reached on (571) 272-4835. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Amadeus S Lopez
Examiner
Art Unit 3771
March 19, 2007

ASL

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SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 3700
3/19/07